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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/770,929	02/03/2004	John B. Hageman	DP-309944	1654

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EXAMINER

NGUYEN, XUAN LAN T

ART UNIT	PAPER NUMBER
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3683

DATE MAILED: 03/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/770,929

Applicant(s)

HAGEMAN ET AL.

Examiner

Lan Nguyen

Art Unit

3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings are objected to because “36” in figure 1 is pointing to the wrong part. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because:
- Brief description of figure 1 is missing.

Art Unit: 3683

- Description of figure 1 as a "Prior Art" in page 2 does not match with the drawing of figure 1.
- Description of figure 2 in page 7 does not match the drawing of figure 2.
- Paragraph [0019] is contradictory in that the device 32 is stated as being incompressible but is able to deform to vary the thickness of the device 32.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 4 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 4 claims said load distribution device is incompressible. As explained above in the objection to the specification, being incompressible and being deformed at the same time is contradictory. Claim 4 is not further treated due to this deficiency.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 3683

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Rinsma et al.

Re: claim 1, Rinsma et al. show an electric caliper assembly for a brake system in figures 2 and 2a, as in the present invention, comprising: a first friction element 5, a piston 35 for engaging said first friction element; an actuator 24 for applying an axial load to said piston; and a universal connection 36 between said piston 35 and said actuator 24 for allowing a swiveling movement of said piston relative to said actuator for evenly distributing said load to said first friction element to minimize side loading of said assembly, see page 5, line 31 to page 6, line 2.

Re: claim 2, Rinsma further shows said universal connection includes a deformable load distribution device 36.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 3, 5, 7-10 and 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rinsma et al. in view of Knott.

Art Unit: 3683

Re: claim 3, Rinsma's assembly, as rejected in claims 1 and 2, lacks a spherical shaped connection. Knott teaches the concept of a spherical shaped connection wherein the actuator 6 comprises a spherical surface 16 opposing a complimentary spherical surface 17 of the piston 11 in order to re-align the brake pad 2 to correct for uneven wear. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Rinsma's assembly to have comprised a spherical shaped connection between the actuator and the piston in order to correct for uneven wear of the brake pad to improve braking performance as taught by Knott.

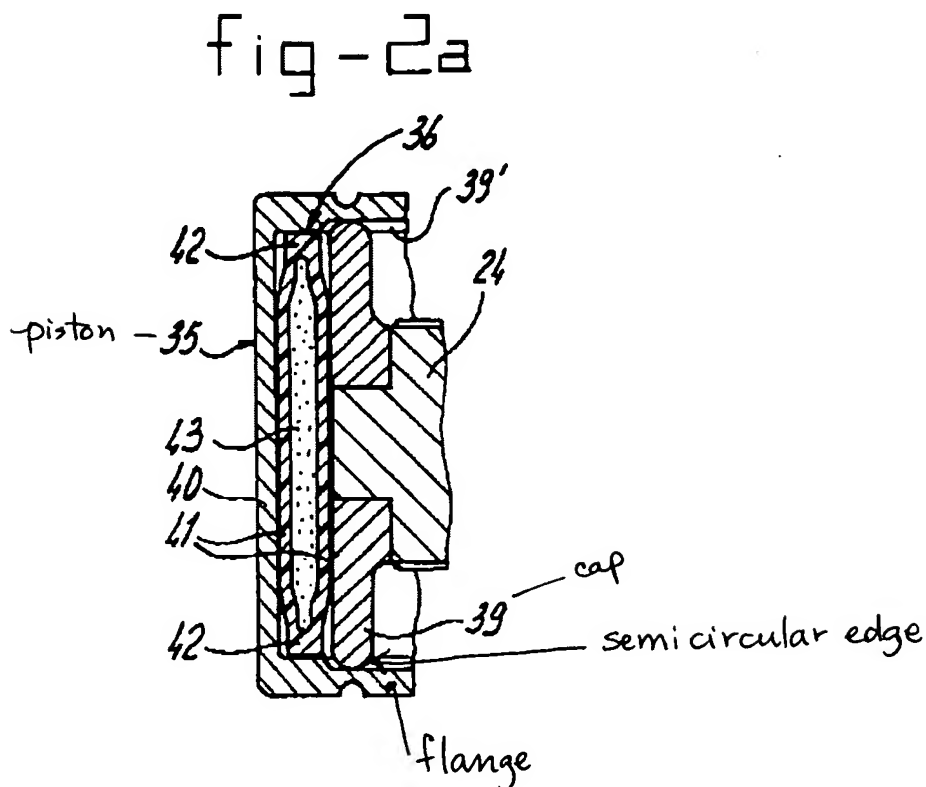
Re: claim 5, Rinsma further shows in figure 3 a heat insulator 55.

Re: claims 7 and 10, Rinsma shows device 36 is a flexible container filled with a flowable material, oil, of a high specific gravity.

Re: claims 8 and 9, the Examiner takes an Official Notice that cloth material and elastomer material are old and well known materials for use as flexible containers, for example, hot air balloons and hot water bottles; and would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed one of these materials for use as a flexible container for Rinsma's assembly, since they are well known and readily available for use.

Re: claim 12, Rinsma further shows a circular cap 39 as claimed.

Re: claims 13-15, Rinsma shows the piston 35 with an annular flange and cap 39 with a semicircular edge for slidably engagement as marked below.



Re: claims 16 and 17, the Examiner takes an Official Notice that O-rings with low frictional properties are old and well known devices for use in sliding engagement between two elements; and would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Rinsma's assembly to have included an O-ring that matches the semicircular edge of Rinsma's cap with a low frictional property in order to aid in the sliding engagement between the cap and the piston; since O-rings with low frictional properties are old and well known devices for use in sliding engagement between two elements and would be readily available for use.

Art Unit: 3683

9. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rinsma et al. in view of Knott and further in view of Thompson.

Rinsma's assembly, as modified, lacks the load distribution device as a solid elastomer. Thompson teaches the equivalency of the use of a liquid or a solid elastomer as a load distribution device 21 or 120, respectively, in figure 4. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Rinsma's assembly to have employed a solid elastomer load distribution device instead of a liquid load distribution device since liquid load distribution devices and solid elastomer load distribution devices are considered equal alternatives in the art of braking as taught by Thompson.

10. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rinsma et al. in view of Knott and further in view of Ruff et al.

Rinsma's assembly, as modified, lacks a flowable material being a plurality of solid particles. Ruff et al. teach an excellent flowable solid particulate material of perlite and cellulose fibers for use as a thermal insulator in column 4, lines 56-66 and column 1, lines 6-10. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed an excellent flowable solid particulate material of perlite and cellulose fibers for use as a thermal insulator as taught by Ruff in an assembly of Rinsma; since Ruff's flowable particulates are well known of being superior in thermal insulation and easy to be received in any shapes or spaces that need thermal insulation as taught by Ruff in column 4, lines 56-66 and column 1, lines 6-10.

Art Unit: 3683

11. Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rinsma et al. in view of Knott and further in view of Thiel et al.

Re: claim 18, Rinsma's assembly, as modified, lacks a bearing as claimed. Thiel et al. teach the use of a bearing 32 located between an actuator 14, 31, 33 and the cap 19 in order to provide smooth rotating engagement between the actuator and the cap in the electric brake system. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have further modified Rinsma's assembly to include a bearing between the actuator and the cap as taught by Thiel in order to provide smooth rotating engagement between the actuator and the cap which in turn would improve the performance of the brake assembly.

Re: claims 19 and 20, Thiel shows the front edge of 23 defining an annular channel with the bearing 32 seated in said channel. Note that the claimed feature "channel" has been treated broadly.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Schaffer is cited for another brake assembly with a universal connection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lan Nguyen whose telephone number is 703-308-8347. The examiner can normally be reached on M-F, 8 to 4:30.

Art Unit: 3683

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor can be reached on 703-308-0830. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lan Nguyen
Patent Examiner
Art Unit 3683



2/28/05